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| 10/045,799      | 01/10/2002  | Erwin Roy John       | 50124/00303         | 5663             |

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NEW YORK, NY 10038

EXAMINER

NASSER, ROBERT L

ART UNIT PAPER NUMBER

3735

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/045,799

Applicant(s)

JOHN ET AL.

Examiner

Robert L. Nasser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 45-49, 51, 52, 54, 55, 59, 65, 66, 68 and 69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45-47 is/are allowed.
- 6) ☒ Claim(s) 48, 49, 51, 52, 54, 55, 59, 65, 66, 68, 69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

Claim 59 is objected to in that it is now redundant of claim 52.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 52, 55, and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Itil et al 5357957. Itil et al shows a connection means, i.e. a headset which includes a headband, mounting eeg electrodes to the body for measuring eeg signals, wireless radio transmitter (column 6, lines 13-26), to transmit the eeg signals to a remote receiver, and a remote receiver which receives the signals and processes them to identify brain function and/or dysfunction (column 1, lines 25-28). In addition, the processing system, connected to the receiver includes an amplifier and a selectively adjustable filter (see column 6, lines 1-30). The examiner notes the features of the processing mention in the first modified embodiment at the top of column 6 are inherently included in the wireless embodiment discussed in the second paragraph of column 6. The system includes an output device, i.e. crt display, for displaying brain function.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48, 49, 51 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasushi et al 5241967 in view of in view of Zimmerman et al 5279305 and Devito. Yasushi et al shows a device with a Lee shows a device with an active electrode 1a, 1b, producing eeg signals, an amplifier 3 amplifying the eeg signals, a selectively adjustable filter 4 (see column 6, lines 7-16) that produces one of the alpha, theta, beta bands or the entire eeg signal, 1-60hz), and a tone generator 14 producing an audio output corresponding to the signal. It does not have the connection means or the telemetry signal. Zimmerman et al teaches that it is desirable to have the electrode arrangement wirelessly communicate with the processor to allow the user freedom of movement during measurement. Hence, it would have been obvious to modify Lee to use wireless communication, so as to allow the patient to move around. In addition, DeVito shows a wireless EEG headband device that includes an amplifier mounted on the headband. It would have been obvious to modify the above combination to use such a headband, as it is merely the substitution of one known equivalent EEG electrode device for another.

Claims 48, 49, 51, 52, 55, 59, 65, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itil et al 5357957 in view of MacNichol Jr 3807387 and Lee 4454886. Itil et al shows a connection means, i.e. a headset which includes a headband, mounting eeg electrodes to the body for measuring eeg signals, wireless radio transmitter (column 6, lines 13-26), to transmit the eeg signals to a remote receiver, and a remote receiver which receives the signals and processes them to

identify brain function and/or dysfunction (column 1, lines 25-28). In addition, the processing system, connected to the receiver includes an amplifier and a selectively adjustable filter (see column 6, lines 1-30). The examiner notes the features of the processing mention in the first modified embodiment at the top of column 6 are inherently included in the wireless embodiment discussed in the second paragraph of column 6. The system includes an output device, i.e. crt display, for displaying brain function. It does not specifically state that it identifies brain injury. However, MacNichol teaches that it is well known to use an EEG signal to identify brain death (injury). Hence, it would have been obvious to modify Itil to identify brain death, as it is merely the substitution of one well known use of an EEG for another. In addition, the combination does not specifically state that it produces an audible warning when injury is detected. It does not specifically state that it identifies brain injury. Lee teaches that an audible output based on the brain waves is better as it allows the physician to immediately identify changes in the brain wave signals and it is easier to understand than a complex waveform. As such, it would have been obvious to modify the above combination to use an audible output, to simplify analysis of the brain waves.

Claims 54 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itil in view of MacNichol Jr and Lee, as applied to claims 48, 49, 51, 52, 55, 59, 65, and 68 above, further in view of Zimmerman et al 5279305. Zimmerman shows an EEG processing system including a headband with electrodes 23, 24, and 25 including a positive and negative electrode. In addition, it is inherent that there is a ground. Hence, it would have been obvious to modify the above combination to use such an electrode

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arrangement, as it is merely the substitution of one known configuration of electrodes for another. Claim 66 is rejected in that applicant has not stated that the specific number of electrode and amplifiers is for a specific purpose or that they solve a stated problem. As such, it appears that the exact number of electrodes and amplifiers would have been a mere matter of design choice for one skilled in the art.

Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Itil et al in view of MacNichol Jr and Lee, as applied to claims 48, 49, 51, 52, 55, 59, 65, and 68 above, further in view of, further in view of John 5287859. John further teaches that split-half rectification is a known processing technique to identify brain dysfunction. As such, it would have been obvious to modify the above combination to use such a technique, as it is merely the substitution of one known equivalent processing technique for another.

Claims 45-47 are allowed. Claims 45-47 define over the art of record in that none of the art compares the F ratio in the presence and absence of stimulation with control data to diagnose injury or dysfunction of the spinal cord, brain stem, or brain, as claimed.

Applicant's arguments filed 9/12/2006 have been fully considered but they are not persuasive.

Applicant has asserted that Yasushi does not have a selectively adjustable filter that separates a frequency band from a group of frequency bands. The examiner notes that in column 6, lines 7-16, Yasushi clearly teaches that the passband of the filter is

selected and therefore adjusted based on desired band to be evoked. This clearly describes a selectively adjustable filter.

Applicant's arguments based on Itil or Itil in view of Ropy are deemed moot in view of the new grounds of rejections.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert L. Nasser whose telephone number is 571 272-4731. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert L. Nasser  
Primary Examiner  
Art Unit 3735

RLN  
November 20, 2006



ROBERT L. NASSER  
PRIMARY EXAMINER